Applying to the NSF Graduate Research Fellowship Program

National Science Foundation

Graduate Research Fellowship Program

info@nsfgrfp.org

www.nsfgrfp.org

PART 1: Program Information

PART 2: Eligibility

PART 3: The GRFP Application

National Science Foundation

- Independent federal agency created in 1950
- Mission
  - To promote the progress of science
  - To advance the national health, prosperity, and welfare
  - To secure the national defense
- Funds ~20% of all federally supported basic research conducted by America's colleges and universities
- **GRFP was NSF's first program, and has supported graduate students every year since 1952**

GRFP Goals

The **OVERALL GOAL** of the Graduate Research Fellowship Program is to **recruit** individuals into Science, Technology, Engineering, and Mathematics (STEM) fields.

- To select, recognize, and financially support individuals who have demonstrated the potential to be high achieving scientists and engineers, **early in their careers**.

- To broaden participation in science and engineering of underrepresented groups, including women, minorities, persons with disabilities, and veterans.

GRFP Features

- **Fellowship**: Awarded to individual
- **Flexible:** Choice of project, advisor, and graduate program
- **Unrestricted:** No service requirement after completion
- **Portable:** Can be used at any accredited, non-profit, US institution of higher education, with campus in US
  - research-based master's and doctoral degrees

- **2010 - 2019:** 2,000 Fellowships yearly
  - 2016: ~16,800 Applications - ~12% success rate
  - 2017: ~13,200 Applications - ~15% success rate
  - 2018: ~12,400 Applications - ~16% success rate
  - 2019: ~12,200 Applications - ~16% success rate

GRFP Benefits

Five Year Award – $138,000

- Three years of support
  - $34,000 Annual Stipend
  - $12,000 Educational allowance directly to graduate institution in lieu of tuition and fees

Other NSF Opportunities

- INTERN – non-academic internship program
- FASED Individuals with Disabilities support
- Career Life Balance awards (family leave)
- Supercomputer access: XSEDE

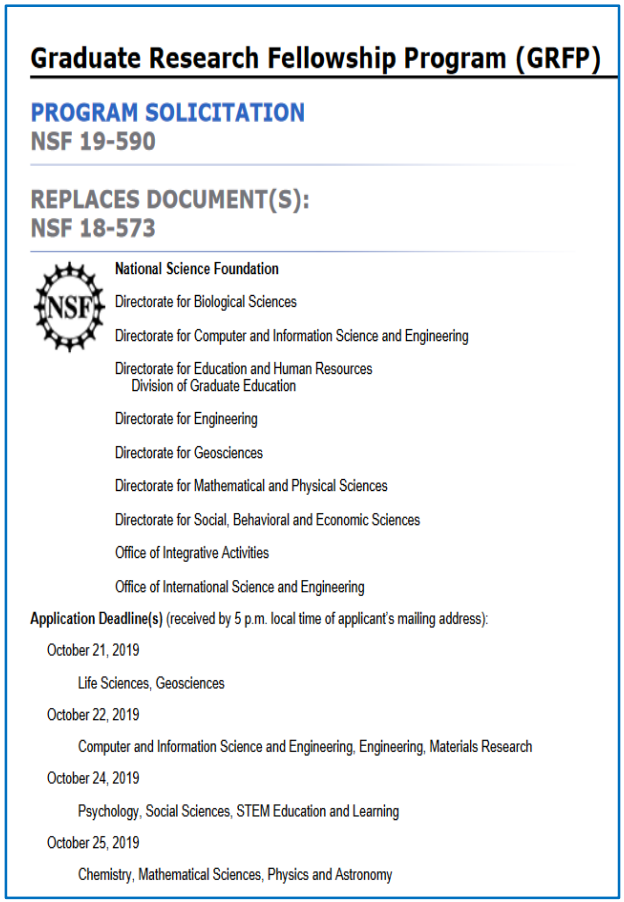
GRFP Solicitation NSF 19-590

Provides the following information:

- Deadlines
- Program description
- Award information
- Eligibility requirements
- Application preparation
- Submission instructions
- Application review criteria

GRFP FAQs: NSF 19-081

nsfgrfp.org



Graduate Research Fellowship Program (GRFP)

PROGRAM SOLICITATION
NSF 19-590

REPLACES DOCUMENT(S):
NSF 18-573

National Science Foundation

Directorate for Biological Sciences

Directorate for Computer and Information Science and Engineering

Directorate for Education and Human Resources
Division of Graduate Education

Directorate for Engineering

Directorate for Geosciences

Directorate for Mathematical and Physical Sciences

Directorate for Social, Behavioral and Economic Sciences

Office of Integrative Activities

Office of International Science and Engineering

Application Deadline(s) (received by 5 p.m. local time of applicant's mailing address):

October 21, 2019

Life Sciences, Geosciences

October 22, 2019

Computer and Information Science and Engineering, Engineering, Materials Research

October 24, 2019

Psychology, Social Sciences, STEM Education and Learning

October 25, 2019

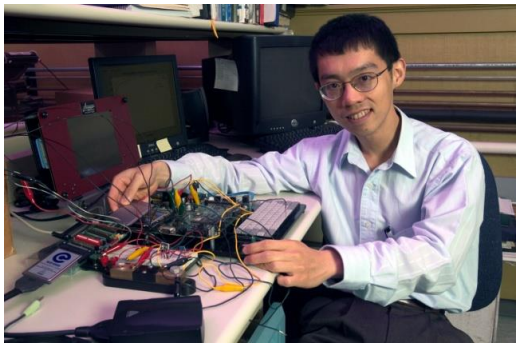
Chemistry, Mathematical Sciences, Physics and Astronomy

PART 2:

Eligibility

GRFP Eligibility Overview

- U.S. citizens, nationals, and permanent residents
- Early-career: undergrad & grad students
- Pursuing research-based master's and/or doctoral degrees
- Science, Technology, Engineering, Mathematics (STEM) or STEM Education
- Full-time enrollment in graduate degree program at accredited, non-profit US institution of higher education
- NO foreign institutions



GRFP Eligibility: Academic Levels

Level 1: Undergraduate seniors and baccalaureates never enrolled in graduate degree program

Level 2: First-year graduate students in *first* graduate degree program. Includes joint bachelor's-master's students who have completed 3 years in joint program

Level 3: Second-year graduate students (no more than one academic year completed in *first* graduate degree program*)*

Level 4: Returning graduate students with >2 year interruption in graduate study; may have master's (no doctorates) or >1 academic year in graduate program; **NOT ENROLLED** in graduate program at application deadline

What if I don't fit in one of those categories?

If you're not in one of those levels, you may not be eligible for GRFP.

See Detailed Eligibility Requirements
GRFP Solicitation NSF 19-590

How often can I apply?

Only one application per person per annual competition

How many times can I apply?

Level 1: Undergraduate Seniors or baccalaureates never enrolled in graduate program

No restriction – can apply every year until enrolled in graduate degree program!

If awarded Fellowship, must enroll in eligible graduate degree program by September 1.

How many times can I apply?

All other levels can apply only ONCE.

Level 2: First-year graduate students in *first* graduate degree program. Includes joint bachelor's-master's* students who have completed 3 years in joint program (*exception for 2019 applicants, see GRFP solicitation).

Level 3: Second-year graduate students (no more than one academic year in *first* graduate degree program).

Level 4: Returning graduate students with >2 year interruption in graduate study; may have master's (no doctorates) or >1 academic year in graduate program; **NOT ENROLLED** in graduate program at application deadline

INELIGIBLE Degree Programs

- Professional degree programs (e.g., MBA, MD, JD, DVM, DDS), and joint science-professional degree programs (MD/PhD, JD/PhD)
- Community, Global, or Public Health (MPH)
- Counseling, Social Work (MSW)
- Education (except STEM education)
- History (except history of science)

See Detailed Eligibility Requirements

GRFP Solicitation NSF 19-590

Eligible Fields of Study

- Chemistry
- Computer & Information Science/Engineering
- Engineering
- Geosciences
- Life Sciences
- Materials Research
- Mathematical Sciences
- Physics and Astronomy
- Psychology
- Social Sciences
- STEM Education

Eligible Sub-Fields of Study

Each major field has numerous sub-fields:

Chemistry

- Chemical Catalysis
- Chemical Measurement and Imaging
- Chemical Structure, Dynamics, and Mechanism
- Chemical Synthesis
- Chemical Theory, Models, and Computational Methods
- Chemistry of Life Process
- Environmental Chemical Systems
- Macromolecular, Supramolecular, and Nanochemistry
- Sustainable Chemistry

Full list for all Eligible Sub-Fields of Study in GRFP Solicitation NSF 19-590:

www.nsfgrfp.org

Ineligible Fields of Study

- **Research with directly health-related goals**
  - Etiology, diagnosis, or treatment of disease
  - Animal models of disease for drug development/testing
  - Epidemiology
  - Disease prevention
  - Public, community, global health
- **Clinical research**
  - Patient-oriented research
  - Epidemiological and behavioral studies
  - Outcomes research
  - Health services, standard of care, health policy
  - Research directly leading to clinical trials
- **Applied research on plant pathology**
  - Maximizing agricultural production
- **Impacts on food safety**

I don’t see my field of study listed.

If your chosen field of study isn’t listed, it may not be eligible for GRFP.

See detailed Field of Study information GRFP Solicitation NSF 19-590

Can I choose “Other” and fill in a field?

Reviewer expertise will be in the Fields of Study listed in the GRFP Solicitation NSF 19-590

Choose Field of Study Carefully!

Your choice determines:

- Expertise of the reviewers for your application

If awarded a fellowship:

- Discipline of graduate degree program – choice must match the broad discipline of your chosen field of study
  - E.g., if you chose a Chemistry field, you can't enroll in Chemical Engineering

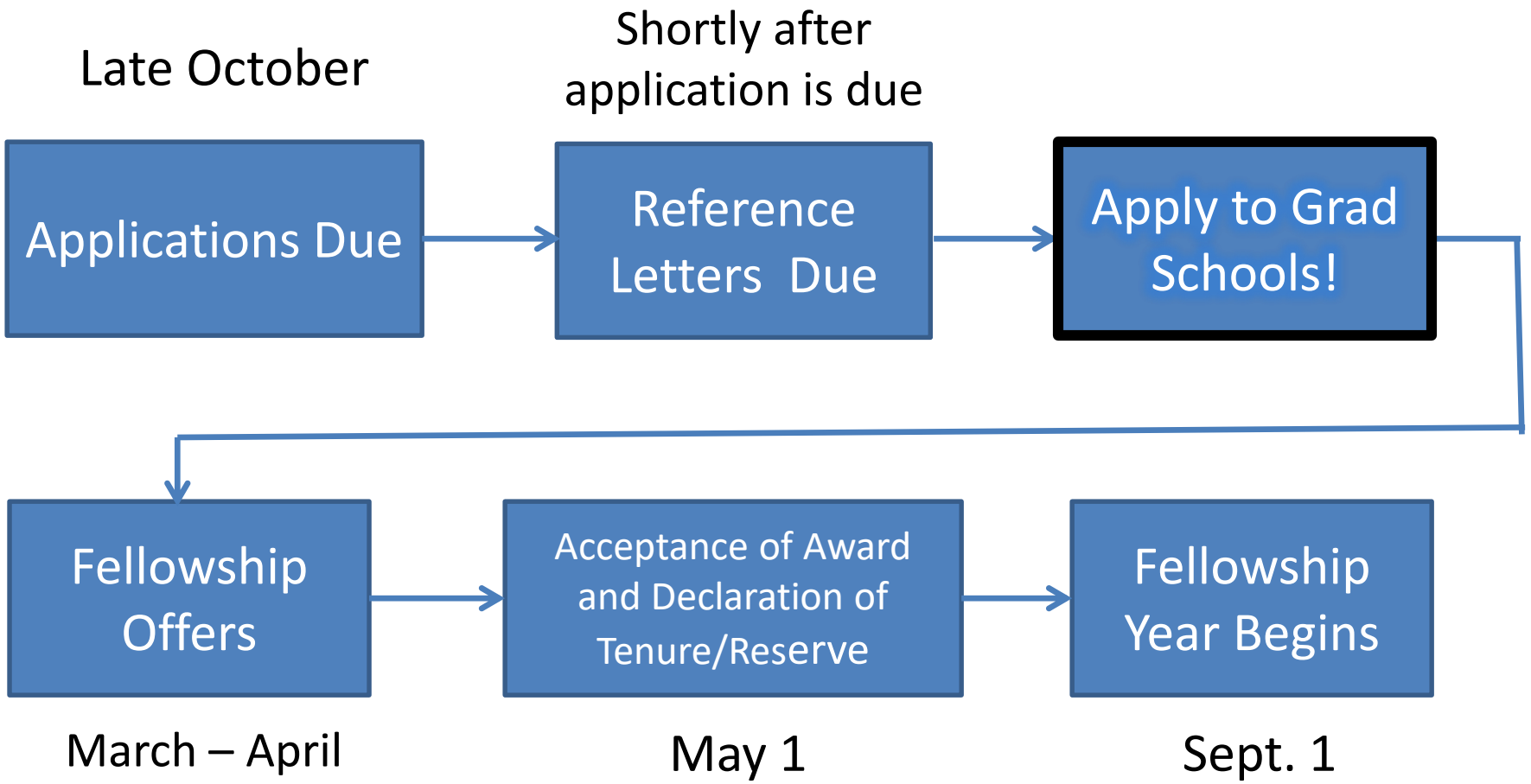
Check out the information at:

https://www.nsfgrfp.org/applicants/application_components/choosing_primary_field

PART 3:

The GRFP Application

GRFP Application Timeline



GRFP Deadlines

Applications DUE: 5pm local time applicant address

October 21, 2019: Life Sciences; Geosciences

October 22, 2019: Computer and Information Science and Engineering; Engineering; Materials Research

October 24, 2019: Psychology; Social Sciences, STEM Education and Learning

October 25, 2019: Chemistry, Mathematical Sciences, Physics and Astronomy

Reference Letters DUE

November 1, 2019, 5pm Eastern Time

No exceptions. No extensions. No materials accepted by email.

GRFP Deadlines

Give yourself plenty of time to prepare the application.

If you require accommodation, please contact info@nsfgrfp.org to coordinate your institutional student services support with NSF support.

Before beginning your application, ask yourself

- What's special, unique, distinctive, and/or impressive about you or your life story?
- What details of your life might help the reviewers better understand you or set you apart from other applicants?

- How did you become interested in this field and what have you learned about it (and about yourself) that has convinced you that you are well suited to this field?
- How have you learned about this field—through classes, readings, seminars, work or other experiences, or conversations with people already in the field?
- How have you capitalized on the opportunities available to you?
- What reasons can you give for reviewers to be interested in you?

GRFP Complete Application

1) Personal Information, Education, Work/Research Experience, Proposed Field of Study, Honors, Awards, Publications
2) **Personal**, Relevant Background and Future Goals **Statement** (3 page PDF)
3) Graduate **Research Statement** (2 page PDF)
4) **Transcripts** (mandatory)
5) **Letters of reference** (2 mandatory; **3 RECOMMENDED**)

Read GRFP Solicitation NSF 19-590 for detailed application instructions and requirements

NSF Merit Review Criteria

Two National Science Board-approved merit review criteria:

- **Intellectual Merit**

  How important is the proposed activity to advancing knowledge within its own field or across different fields?

- **Broader Impacts**

  How well does the proposed activity benefit society or advance desired societal outcomes?

Intellectual Merit

Your potential to advance knowledge

- Demonstrated intellectual ability (grades, curricula, awards, etc.)
- Other evidence of your potential, such as ability to:
  - Plan and conduct research
  - Work as a member of a team as well as independently
  - Interpret and communicate research
  - Take initiative, solve problems, persist.

The potential of <u>your approach</u> to your field of study and your Research Plan to advance knowledge.

Evidence of <u>Intellectual Merit</u> can be found in all parts of the application - Personal Statement, Research Plan, letters, experiences, awards, achievements, and transcripts.

Broader Impacts

- **Potential impact of the individual (you!) on society**
- **Potential impact of your research on society; why it's important**

Societal benefits may include, but are not limited to:

- Increasing participation of underrepresented groups, women, students with disabilities, veterans
- Outreach: Mentoring; improving STEM education in schools
- Increasing public scientific literacy; increased public engagement with STEM
- Community outreach: science clubs, radio, TV, newspapers, blogs
- Potential to impact a diverse, globally competitive workforce
- Increasing collaboration between academia, industry, others

Evidence of Broader Impacts can be in all parts of the application - Personal Statement, Research Plan, letters, experiences, awards, achievements.

Formatting Personal and Research Statements

Follow formatting instructions **EXACTLY**

- 8.5x11” page size
- 12-pt Times New Roman font (10-pt for references, captions, in-figure text)
- 1” margins all sides
- Single-spaced

Applications that don’t comply with format requirements will be **returned without review**.

Preparing a Competitive GRFP Application

Personal Statement

Tell your story; demonstrate your potential for STEM research:

- Experiences (professional and personal) that contributed to your motivation and preparation for pursuing a STEM career
- Previous research/industrial/professional experiences
  - What was the project?
  - How did you become involved? Where was it done?
  - Why was this project worth doing?
  - What was your contribution to the project?
  - How did your part of the project fit into the whole?
  - What have you learned?
  - Any advanced course work?
- Career aspirations and future goals
  - How have your experiences shaped your goals?

Clearly address NSF's Merit Review Criteria – Intellectual Merit and Broader Impacts – in separate sections.

Preparing a Competitive GRFP Application

Research Statement

Describe your proposed research plan:

- Communicate your research idea and approach
- Explain your research plan and methods
- What do you expect to learn? How will you know if the project is successful?
- What would you do next?

Keep in mind:

- Avoid jargon
- Communicate clearly for non-specialists
- Make your contributions clear

Clearly address NSF's Merit Review Criteria – Intellectual Merit and Broader Impacts – in separate sections.

Transcripts

- All applicants must submit bachelor's degree transcript
- Transcripts are required for all institutions listed
- Graduate transcripts for all graduate degree enrollment
  - 1st year grad students – if no graduate transcript available, upload class schedule or enrollment verification
- Official or unofficial transcripts accepted
  - Must meet requirements described in GRFP solicitation
  - PDFs only, no links

Applications will not be accepted without a transcript.

Reference Letters

GRFP letters differ from regular grad school letters.

- Make sure your reference writers know about GRFP and NSF's **Intellectual Merit** and **Broader Impacts** criteria**.**
- Ask if they think they know you well enough to write a strong letter.
- Discuss with them why you think you're a good candidate for GRFP (show them your statements before you apply).
- **For reference letter writers:**
  - GREs are **not** part of the application.
  - A strong letter can say things that students wouldn't say about themselves.
  - Do not overshadow the student if you describe their research.

Reference Letters

Reference Letter Deadline:
Friday, November 1, 2019 5PM ET

- **THREE (3) reference letters are STRONGLY RECOMMENDED**
- Two (2) reference letters are **MANDATORY**
- List and rank up to 5 reference letter writers
  - Top 3 will be used
- Select your reference letter writers carefully
  - Familiarity with you as a person is important
  - Share personal and research statements with them
- **View Your Application Package Status** in the GRFP site to monitor letter submission

No exceptions or extensions for Reference Letter deadline.

Application Review Process

- Your application is reviewed by disciplinary and interdisciplinary STEM experts.

- Applications are assigned to reviewers based on your chosen Field of Study. Select the Field of Study most closely aligned with your proposed graduate program of study.

- Prepare your statements with your audience in mind. Reviewers have broad disciplinary expertise but may not be specialists.

Choose Field of Study Carefully!

Your choice determines:

- Expertise of the reviewers for your application
- Discipline of your graduate degree program if awarded fellowship – choice must match the broad discipline of your chosen field of study
  - E.g., if you chose a Chemistry field, you can't enroll in Chemical Engineering

Check out the information at:

https://www.nsfgrfp.org/applicants/application_components/choosing_primary_field

Comprehensive Review

Applicants are reviewed based on their demonstrated potential for significant achievement in STEM, using a comprehensive, holistic approach that gives balanced consideration to all components of the application, including the educational and research record, leadership, outreach, service activities, future plans, individual competencies, experiences, and other attributes.

Prepare a competitive application

- **START EARLY!**
- Read the current Solicitation, ***and read it again!***
- See tips and FAQs at NSF GRFP website (www.nsfgrfp.org)
- Clearly address NSF Merit Review Criteria.
- Describe your honors, experiences, presentations, any publications (etc.) clearly for the reviewers.
- Your statements should be interesting and clear. Ask colleagues to read and comment on drafts.
- Share your application materials and the Merit Review Criteria with your reference letter writers.
- Select, contact, and confirm your reference letter writers.
- **View Your Application Package Status** on GRFP site frequently.

Click SUBMIT!

Remember to hit SUBMIT after you complete your application. Unsubmitted applications are considered incomplete and will not be reviewed.

APPLY EARLY!

Don’t risk wasting hours of work because you waited to the last minute to submit your application.

No exceptions or extensions for the application and reference letter deadlines.

GRFP Resources

- GRFP Website: www.nsfgrfp.org

  Includes tips for applying, FAQs

- NSF GRFP Website: www.nsf.gov/grfp

  Solicitation & FAQs; NSF 19-590 and NSF 19-081

- Apply on Research.gov
  www.research.gov/grfp/Login.do

Questions?
https://nsfgrfp.org/

info@nsfgrfp.org
866-673-4737
(M-F, 8:30-5:30PM ET)

Good luck!